

Form PTO-1449

Docket No. 223002010005

Application No.: 09/884,456

INFORMATION DISCLOSURE CITATION
IN A PATENT

Applicant:

Michael HOUGHTON et al.

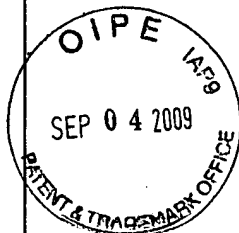
Filing Date: June 18, 2001

Group Art Unit: 1656

Examiner: William W. Moore

Confirmation No. 1937

Delivery Date: September 4, 2009



(several sheets followed)

U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date if Appropriate
	1.	09/27/94	5,350,671	Houghton et al.			
	2.	12/13/94	5,372,928	Miyamura et al.			
	3.	02/16/99	5,871,903	Miyamura et al.			

FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO
	4.	04/24/85	EP 0 138 111 B1	Europe			
	5.	05/31/89	EP 0 318 216 B1	Europe			
	6.	06/01/89	WO 89/04669	PCT			

OTHER DOCUMENTS

Examiner Initials	Ref. No.	OTHER DOCUMENTS (including author, title, date, etc.)
	7.	Response to Chiron's Claim Chart Pursuant to Civil Local Rule 16-9(b) on U.S. Patent Nos. 5,371,017, 5,585,258 and 5,397,691 by Defendant Agouron Pharmaceuticals Incorporated. Chiron Corporation v. Agouron Pharmaceuticals, Inc.: Case No. C 98-2995 CW (PJH) (Related Cases C 98-9874 CW and C98-2994 CW). In the United States District Court, Northern District of California, Oakland Division.
	8.	Joint Response to Chiron's Claim Chart Pursuant to Civil Local Rule 16-9(b) on U.S. Patent Nos. 5,371,017, 5,585,258 and 5,397,691 by Defendants Eli Lilly and Company and Vertex Pharmaceuticals Incorporated. Chiron Corporation v. Eli Lilly and Company, and Vertex Pharmaceuticals Inc.: Case No. C 98-2974 (Related Action Nos. C 98-2994 CW and C 98-2995 CW). In the United States District Court, Northern District of California, Oakland Division.

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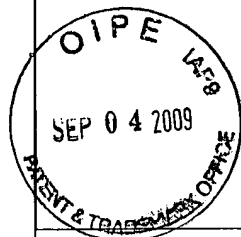
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	9.	Abrahmsén et al. (1986). "Secretion of heterologous gene products to the culture medium of <i>Escherichia coli</i> " <i>Nucl. Acids Res.</i> 14(18):7487-7500.
	10.	Bazan et al. (1988). "Viral cysteine proteases are homologous to the trypsin-like family of serine proteases: Structural and functional implications" <i>PNAS</i> 85:7872-7876.
	11.	Bazan et al. (1989). "Detection of a trypsin-like serine protease domain in flaviviruses and pestiviruses" <i>Virology</i> 171:637-639.
	12.	Bazan et al. (1989). "Viral branches of the trypsin-like protease family" in <i>UCLA Symposia on Molecular & Cellular Biology, 18th Annual Meeting, J. Cell. Biochem.</i> 13A:50 (Abstract A101).
	13.	Bazan et al. (1989). "Comparative analysis of viral cysteine protease structural models" <i>FEBS Lett.</i> 249(1):5-7.
	14.	Beach et al. (1991). "Analysis of the putative nonstructural gene region of hepatitis C virus" in <i>Viral Hepatitis and Liver Disease: Proceedings of the 1990 International Symposium on Viral Hepatitis and Liver Disease: Contemporary Issues and Future Prospects</i> , Hollinger et al. eds., pp. 320-328.
	15.	Biedrzycka et al. (1987). "Characterization of protease cleavage sites involved in the formation of the envelope glycoprotein and three non-structural proteins of dengue virus type 2, New Guinea C strain" <i>J. Gen. Virol.</i> 68:1317-1326.
	16.	Boonmar et al. (1990). "Molecular Cloning of Hepatitis C Virus cDNA from Plasma of an Implicated Donor of Posttransfusion Non-A, Non-B Hepatitis" in <i>Proceedings of the 1990 International Symposium On Viral Hepatitis and Liver Disease</i> , Blaine et al. eds., Williams & Wilkins: Baltimore, pp. 371-374.
	17.	Bradley et al. (1991). "Hepatitis C virus: Background and strategies for cloning a major etiologic agent for PT-NANBH" in <i>Viral Hepatitis and Liver Disease: Proceedings of the 1990 International Symposium on Viral Hepatitis and Liver Disease: Contemporary issues and Future Prospects</i> , Hollinger et al. eds., pp. 320-328.
	18.	Brake et al. (August, 1984). "α-factor-directed synthesis and secretion of mature foreign proteins in <i>Saccharomyces cerevisiae</i> " <i>PNAS</i> 81:4642-4646.
	19.	Castle et al. (1986). "Primary structure of the west nile flavivirus genome region coding for all nonstructural proteins" <i>Virology</i> 149:10-26.
	20.	Chambers et al. (1989). "Yellow fever virus proteins NS2A, NS2B, and NS4B: Identification and partial N-terminal amino acid sequence analysis" <i>Virology</i> 169:100-109.
	21.	Chambers et al. (1990). "Flavivirus genome organization, expression, and replication" in <i>44 annual Review in Microbiology</i> , Ornston et al. eds., 649-688.

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	22.	Choo et al. (April 21, 1989). "Isolation of a cDNA clone derived from a blood-borne non-A, non-B viral hepatitis genome" <i>Science</i> 244:359-362.
	23.	Choo et al. (1990). "Detection and mapping of immunologic epitopes expressed by bacterial cDNA clones of the hepatitis C virus" in <u>Viral Hepatitis and Liver Disease: Proceedings of the 1990 International Symposium on Viral Hepatitis and Liver Disease: Contemporary Issues and Future Prospects</u> , Hollinger et al. eds., pp. 3345-3346.
	24.	Choo et al. (September, 1989). "Hepatitis C virus is a distant relative of the flaviviruses and pestiviruses" Chapter 5 in <u>Viral Hepatitis C, D and E</u> , Shikata, ed., Excerpta Medica: New York, pp. 47-52.
	25.	Choo et al. (March 1991). "Genetic organization and diversity of the hepatitis C virus" <i>PNAS</i> 88:2451-2455.
	26.	Coia et al. (1988). "Nucleotide and complete amino acid sequences of kunjin Virus: Definitive gene order and characteristics of the virus-specified proteins" <i>J. Gen. Virol.</i> 69:1-21.
	27.	Collett et al. (1988). "Comparisons of the pestivirus bovine viral diarrhoea virus with members of the flaviviridae" <i>J. Gen. Virol.</i> 69:2637-2643.
	28.	Collett et al. (1988). "Molecular cloning and nucleotide sequence of the pestivirus bovine viral diarrhea virus" <i>Virology</i> 165:191-199.
	29.	Collett et al. (1988). "Proteins encoded by bovine viral diarrhea virus: The genomic organization of a pestivirus" <i>Virology</i> 165:200-208.
	30.	Cousens et al. (1987). "High level expression of proinsulin in the yeast, <i>Saccharomyces cerevisiae</i> " <i>Gene</i> 61:265-275.
	31.	Dalgarno et al. (1986). "Partial nucleotide sequence of the Murray Valley Encephalitis virus genome: Comparison of the encoded polypeptides with yellow fever virus structural and non-structural proteins" <i>J. Mol. Biol.</i> 187:309-323.
	32.	Deubel et al. (1988). "Nucleotide sequence and deduced amino acid sequence of the nonstructural proteins of dengue type 2 virus, Jamaica genotype: Comparative analysis of the full-length genome" <i>Virology</i> 165:234-244.
	33.	Gorbalenya et al. (January, 1986). "Polivirus-encoded proteinase 3C: A possible evolutionary link between cellular serine and cysteine proteinase families" <i>FEBS Lett.</i> 194(2):253-257.
	34.	Gorbalenya et al. (1988). "One more conserved sequence motif in helicases" <i>Nucl. Acids Res.</i> 16(15):7734.
	35.	Gorbalenya et al. (1989). "Two related superfamilies of putative helicases involved in replication, recombination, repair and expression of DNA and RNA genomes" <i>Nucl. Acids Res.</i> 17(12):4713-4730.

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	37.	Gorbalenya. (1989). "N-terminal domains of putative helicases of flavi- and pestiviruses may be serine proteases" <i>Nucl. Acids Res.</i> 17(10):3889-3897.
	38.	Hahn et al. (1988). "Nucleotide sequence of dengue 2 RNA and comparison of the encoded proteins with those of other flaviviruses" <i>Virology</i> 162:167-180.
	39.	Hopp et al. (October 1988). "A short polypeptide marker sequence useful for recombinant protein identification and purification" <i>Bio/Technology</i> 6:1204-1210.
	40.	Houghton et al. (1991). "Hepatitis C virus (HCV): A relative of the pestiviruses and flaviviruses" in <i>Viral Hepatitis and Liver Disease: Proceedings of the 1990 International Symposium on Viral Hepatitis and Liver Disease: Contemporary Issues and Future Prospects</i> , Hollinger et al. eds., pp. 328-333.
	41.	James et al. (1978). "Amino acid sequence alignment of bacterial and mammalian pancreatic serine proteases based on topological equivalences" <i>CJBIAE</i> 56(6):396-402.
	42.	Kato et al. (1989). "Japanese isolates of the non-A, non-B hepatitis viral genome show sequence variations from the original isolate in the USA" <i>Proc. Jap. Acad.</i> 65(9):219-223.
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	47.	Kuo et al. (April 21, 1989). An assay for circulating antibodies to a major etiologic virus of human non-A, non-B hepatitis" <i>Science</i> 244:362-364.
	48.	Lain et al. (1989). "Homologous potyvirus and flavivirus proteins belonging to a superfamily of helicase-like proteins" <i>Gene</i> 82:357-362.
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	50.	Mandl et al. (1989). "Genome sequence of tick-borne Encephalitis virus (western subtype) and comparative analysis of nonstructural proteins with other flaviviruses" <i>Virology</i> 173:291-301.
	51.	Markoff. (1989). "In vitro processing of dengue virus structural proteins: Cleavage of the pre-membrane protein" <i>J. Virol.</i> 63(8):3345-3352.

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	52.	Meyers et al. (1989). "Molecular cloning and nucleotide sequence of the genome of hog cholera virus" <i>Virology</i> 171:555-567.
	53.	Miller et al. (1990) "Hepatitis C virus shares amino acid sequence similarity with pestiviruses and flaviviruses as well as members of two plant virus supergroups" <i>PNAS USA</i> 87:2057-2061.
	54.	Neurath. (April 27, 1984). "Evolution of proteolytic enzymes" <i>Science</i> 224:350-57.
	55.	Nowak et al. (1989). "Analyses of the terminal sequences of west nile virus structural proteins and of the in vitro translation of these proteins allow the proposal of a complete scheme of the proteolytic cleavages involved in their synthesis" <i>Virology</i> 169:365-376.
	56.	Rice et al. (1985). "Nucleotide sequence of yellow fever virus: Implications for flavivirus gene expression and evolution" <i>Science</i> 229:726-733.
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	58.	Rice et al. (1986). "Structure of the flavivirus genome" Chapter 10, in <i>The Togaviridae and Flaviviridae</i> , Schlesinger et al., eds., Plenum Press: New York, pp. 279-326.
	59.	Ruiz-Linares et al. (1989). "Processing of yellow fever virus polypeptide: Role of cellular proteases in maturation of the structural proteins" <i>J. Virol.</i> 63(10):4199-4209.
	60.	Speight et al. (1988). "Gene mapping and positive identification of the non-structural proteins NS2A, NS2B, NS3, NS4B and NS5 of the flavivirus kunjin and their cleavage sites" <i>J. Gen. Virol.</i> 69:23-34.
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	62.	Strauss et al. (1986). "Replication of alphaviruses and flaviviruses: Proteolytic processing of polyproteins" in <i>Positive Strand RNA Viruses: Proceedings of a UCLA Symposium held in Keystone, Colorado</i> , Brinton et al., eds., Alan R. Liss: New York, pp. 209-225.
	63.	Strauss et al. (1988). "Replication of the RNAs of alphaviruses and flaviviruses" Chapter 4 in <i>RNA Genetics: RNA directed virus Replication</i> , Vol. 1, Domingo et al., eds., CRC Press: Boca Raton, Florida, pp. 71-90.
	64.	Strauss et al. (1991). "Structure and function of the flavivirus and pestivirus genomes" in <i>Viral Hepatitis and Liver Disease: Proceedings of the 1990 International Symposium on Viral Hepatitis and Liver Disease: Contemporary Issues and Future Prospects</i> , Hollinger et al. eds., pp. 333-334.
	65.	Sumiyoshi et al. (1987). "Complete nucleotide sequence of the Japanese Encephalitis virus genome RNA" <i>Virology</i> 161:497-510.
	66.	Trent et al. (1987). "Partial nucleotide sequence of St. Louis Encephalitis virus RNA: Structural proteins, NS1, ns2a, and ns2b" <i>Virology</i> 156:293-304.

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	67.	Weiner et al. (1990). "Detection of hepatitis C viral sequences in non-A, non-B hepatitis" <i>The Lancet</i> 335(8680):1-3.
	68.	Wellink et al. (1988). "Proteases involved in the processing of viral polyproteins" <i>Arch. Virol.</i> 98:1-26.
	69.	Westaway et al. (1985). "Flaviviridae" <i>Interviol.</i> 24:183-192.
	70.	Yaegashi et al. (1986). "Partial sequence analysis of cloned dengue virus type 2 genome" <i>Gene</i> 46:257-267.

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	100.	11/20/1973	3,773,924	Ho et al.			
	101.	05/13/1975	3,883,497	Gregory et al.			
	102.	06/02/1981	4,271,145	Wands et al.			
	103.	10/26/1982	4,356,164	Tabor et al.			
	104.	07/26/1983	4,395,395	Tabor et al.			
	105.	02/14/1984	4,431,740	Bell et al.			
	106.	03/20/1984	4,438,098	Tabor et al.			
	107.	08/07/1984	4,464,474	Coursaget et al.			
	108.	09/17/1985	4,542,016	Trepo			
	109.	02/11/1986	4,569,794	Smith et al.			
	110.	03/24/1987	4,652,525	Rutter et al.			
	111.	11/17/1987	4,707,439	Seto et al.			
	112.	09/06/1988	4,769,331	Roizman et al.			
	113.	10/11/1988	4,777,245	Foung et al.			
	114.	09/26/1989	4,870,008	Brake			
	115.	09/26/1989	4,870,026	Wands et al.			
	116.	10/03/1989	4,871,659	Pillot			
	117.	08/28/1990	4,952,493	Kettner et al.			
	118.	08/28/1990	4,952,494	Zeldis et al.			
	119.	09/25/1990	4,959,317	Saeuer			
	120.	04/23/1991	5,010,175	Rutter et al.			
	121.	07/16/1991	5,032,511	Takahashi et al.			
	122.	12/31/1991	5,077,193	Mishiro et al.			
	123.	04/28/1992	5,108,919	Liu et al.			

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	124.	07/21/1992	5,132,213	Bachmair et al.			
	125.	11/24/1992	5,166,057	Palese et al.			
	126.	01/05/1993	5,176,994	Mishiro et al.			
	127.	06/08/1993	5,218,099	Reyes et al.			
	128.	10/12/1993	5,252,477	Oroszlan et al.			
	129.	02/22/1994	5,288,641	Roizman			
	130.	05/31/1994	5,317,086	Bartlett et al.			
	131.	06/27/1995	5,428,145	Okamoto et al.			
	132.	07/25/1995	5,436,318	Reyes et al.			
	133.	08/01/1995	5,437,974	Ryan et al.			
	134.	08/22/1995	5,443,965	Reyes et al.			
	135.	12/26/1995	5,478,727	Roizman et al.			
	136.	03/12/1996	5,498,616	Mallamo et al.			
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	141.	09/03/1996	5,552,310	Yoshikura et al.			
	142.	12/17/1996	5,585,258	Houghton et al.			
	143.	01/28/1997	5,597,691	Houghton et al.			
	144.	10/21/1997	5,679,342	Houghton et al.			
	145.	12/16/1997	5,698,390	Houghton et al.			
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	147.	01/27/1998	5,712,088	Houghton et al.			
	148.	01/27/1998	5,712,145	Houghton et al.			

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	151.	04/14/1998	5,739,002	De Francesco et al.			
	152.	05/05/1998	5,747,240	Kink et al.			
	153.	05/05/1998	5,747,241	Miyamura et al.			
	154.	05/05/1998	5,747,339	Okayama et al.			
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	158.	12/01/1998	5,843,752	Dasmahapatra et al.			
	159.	01/05/1999	5,856,437	Miyamura et al.			
	160.	01/19/1999	5,861,267	Su			
	161.	01/26/1999	5,863,719	Houghton et al.			
	162.	02/23/1999	5,874,565	Rice et al.			
	163.	03/23/1999	5,885,799	Houghton et al.			
	164.	09/28/1999	5,959,092	Miyamura et al.			
	165.	10/19/1999	5,968,775	Houghton et al.			
	166.	11/23/1999	5,989,905	Houghton et al.			
	167.	02/22/2000	6,027,729	Houghton et al.			
	168.	05/30/2000	6,068,994	Barr			
	169.	08/01/2000	6,096,541	Houghton et al.			
	170.	09/12/2000	6,117,639	Germann et al.			
	171.	10/03/2000	6,127,116	Rice et al.			
	172.	11/14/2000	6,147,100	Seno et al.			
	173.	11/28/2000	6,153,579	Kim et al.			

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	176.	10/05/1991	CA 2,079,105	Canada				
	177.	04/29/1981	0 027 657	Europe				
	178.	02/17/1982	0 046 039	Europe				
	179.	09/01/1982	0 058 676	Europe				
	180.	10/06/1982	0 061 974	Europe				
	181.	12/08/1982	0 066 296	Europe				
	182.	01/05/1983	0 068 465	Europe				
	183.	02/16/1983	0 071 640	Europe				
	184.	03/30/1983	0 074 986	Europe			Abstract	
	185.	10/26/1983	0 092 249	Europe				
	186.	08/22/1984	0 116 201	Europe				
	187.	10/03/1984	0 120 551	Europe				
	188.	11/14/1984	0 124 896	Europe			Abstract	
	189.	12/27/1984	0 128 995	Europe				
	190.	09/11/1985	0 154 392	Europe				

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	192.	07/02/1986	0 186 526	Europe				
	193.	08/13/1986	0 190 972	Europe				
	194.	09/10/1986	0 194 207	Europe				
	195.	10/01/1986	0 196 056	Europe				
	196.	01/14/1987	0 208 672	Europe				
	197.	10/21/1987	0 242 300	Europe			Abstract	
	198.	04/13/1988	0 263 761	Europe				
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	201.	11/30/1988	0 293 274	Europe				
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	204.	04/11/1990	0 363 025	Europe				
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	211.	10/09/1991	0 450 931	Europe				
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	215.	04/08/1992	0 479 376	Europe				
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	219.	01/21/1982	WO 82/00205	WIPO				
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	227.	08/25/1988	WO 88/06184	WIPO				
	228.	11/16/1989	WO 89/10931	WIPO				
	229.	12/28/1989	WO 89/12462	WIPO				
	230.	12/28/1989	WO 89/12641	WIPO				

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	237.	10/17/1991	WO 91/15575	WIPO				
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	258.	04/03/1997	WO 97/12043	WIPO				
	259.	10/09/1997	WO 97/36554	WIPO				
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	261.	01/08/1998	WO 98/00548	WIPO				
	262.	03/19/1998	WO 98/11134	WIPO				
	263.	03/26/1998	WO 98/12308	WIPO				
	264.	04/02/1998	WO 98/13482	WIPO				
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	903.	Defendant Gilead Sciences, Inc.'s Answer to Complaint and Counterclaims, Chiron Corporation v. Gilead Sciences, Inc.: Case No. C-98-2994 VRW, United States District Court, Northern District of California. 09/21/98
	904.	Answer and Counterclaims of Defendant Agouron Pharmaceuticals, Inc. Chiron Corporation v. Agouron Pharmaceuticals, Inc.: Civil Action No. C-98-2995 SI. United States District Court, Northern District of California. 10/01/98
	905.	Defendant Gilead Sciences, Inc.'s Initial Disclosure of Prior Art Pursuant to Civil Local Rule 16-7. Chiron Corporation v. Gilead Sciences, Inc., and Related Actions: Case No. C-98-2994 CW. United States District Court, Northern District of California. 11/10/98
	906.	Vertex's Initial Disclosure of Prior Art for U.S. Patent Nos. 5,371,017, 5,585,258 and 5,597,691 under Local Rule 16-7(d). Chiron Corporation v. Eli Lilly and Company, and Vertex Pharmaceuticals Inc. Civil No. 98-2974 CW (ENE). United States District Court, Northern District of California. 11/12/98
	907.	Lilly's Initial Disclosure of Prior Art for U.S. Patent Nos. 5,371,017, 5,585,258, and 5,597,691 Under Local Rule 1607(d)-(f). 11/12/98
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	909.	Answer of Defendant Vertex Pharmaceuticals Incorporated. Chiron Corporation v. Eli Lilly & Co., and Vertex Pharmaceuticals Incorporated. Case No.: C-98-2974 CW [PJH], Related Action Nos: C-98-2994 CW [PJH] and C-98-2995. 02/01/99
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	912.	Gilead Sciences, Inc.'s Response to Chiron's Proposed Claim Construction Statement on the '017, '258 and '691 Patents Pursuant to Local Rule 16-10(b). Chiron Corporation v. Gilead Sciences, Inc. Case No. C-98-2994 CW [PJH]. 03/22/99
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	914.	Response Chart to Chiron's Claim Chart on U.S. Patent Nos. 5,371,017, 5,585,258 and 5,397,691 Pursuant to Local Rule 16-9(b) by Defendant and Counterclaimant Gilead Sciences, Inc. Chiron Corporation v. Gilead Sciences, Inc. Case No. C-98-2994 CW [PJH], Related Action Nos. C-98-02995 CW [PJH] and C-98-02974 CW [PJH]. 03/22/99
	915.	Agouron's Response Chart to Chiron's Claim Chart on U.S. Patent Nos. 5,371,017, 5,585,258 and 5,397,691 Pursuant to Local Rule 16-9(b). Chiron Corporation v. Agouron Pharmaceuticals, Inc. Case No. C-98-2995 CW [PJH], Related Cases C-98-9874 CW and C-98-2994 CW. 08/04/99
	916.	Eli Lilly and Company's First Supplemental Disclosure of Prior Art for U.S. Patent Nos. 5,371,017, 5,585,258, and 5,597,691 Pursuant to Civil Local Rule 16-7(d). Chiron Corporation v. Eli Lilly and Company, and Vertex Pharmaceuticals, Inc. Case No. C-98-2974 CW, Related Action Nos. C-98-2994 CW and C-98-2995 CW. 08/04/99.
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	918.	Joint Claim Construction Statement Pursuant to Local Rule 16-11(b). Chiron Corporation v. Eli Lilly & Co., Vertex Pharmaceuticals, Inc. No. C-98-02974 CW [PJH], Related Action Nos. C-98-02995 CW [PJH] and C-98-02994 CW [PJH]. 09/07/99.
	919.	Amended Response Chart Pursuant to Civil Local Rule 16-9(b) by Defendants Eli Lilly and Company and Vertex Pharmaceuticals Incorporated. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. Case No. C-98-2974 CW, Related Action Nos. C-98-2994 CW and C-98-2995 CW. 10/22/99.
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	921.	Amended Response Chart Pursuant to Civil Local Rule 16-9(b) by Defendants Eli Lilly and Company and Vertex Pharmaceuticals Incorporated. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals, Inc. Case No. C-98-2974 CW, Related Action Nos. C-98-2994 CW and C-98-2995 CW. 11/18/99.

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	922.	Findings of Fact, Conclusions of Law and Proposed Order for Motion 4A by Defendants Agouron Pharmaceuticals, Inc. Chiron Corporation v. Agouron Pharmaceuticals, Inc. Case No. C 98-2995 CW (PJH)
	923.	Eli Lilly and Company's and Vertex Pharmaceutical Incorporated's Proposed Findings of Fact and Conclusions of Law in Support of a Judgment to Pierce Attorney-Client Privilege and Work Product Immunity Under the Crime-Fraud Exception. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals, Inc. Case Nos. C-98-2974 CW and C-98-2995 CW.
	924.	Reporter's Transcript of Proceedings Before Special Masters Catherine A. Yanni and David W. Yount. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals, Inc.; Chiron Corporation v. Gilead Sciences, Inc.; Chiron Corporation v. Agouron Pharmaceuticals, Inc. Case Nos. C-98-2974 CW ENE, C-98-2994 CW and C-98-2995 CW. 5/24/2000.
	925.	Hearing Before Special Master. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals, Inc.; Chiron Corporation v. Gilead Sciences, Inc.; Chiron Corporation v. Agouron Pharmaceuticals, Inc. Case Nos. C-98-2974 CW ENE, C-98-2994 CW and C-98-2995 CW. 9/8/1999.
	926.	Agouron Pharmaceuticals, Inc. for Request for Examination regarding Patent No. 5,371,017 filed on December 6, 1999 with exhibits thereto.
	927.	Vertex's Objections and Responses to Chiron's First Set of Interrogatories. Chiron Corporation v. Eli Lilly & Co. and Vertex Pharmaceuticals Inc. Civil No. C-98-2974 CW [PJH], Related Action Nos. C-98-2994 CW [PJH] and C-98-2995 CW [PJH]. 03/22/99
	928.	Defendant Eli Lilly and Company's Response to Chiron's First Set of Interrogatories. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. Case Nos. C-98-2974 CW [PJH], Related Action Nos. C-98-2994 CW and C-98-2995 CW. 03/22/99
	929.	Agouron's Supplemental Objections and Responses to Chiron's First Set of Interrogatories (Nos. 1-16). Chiron Corporation v. Agouron Pharmaceuticals, Inc. Case No. C-98-02995 CW [PJH], Related Action Nos. C-98-02974 CW [PJH] and C-98-02994 CW [PJH]. 08/19/99
	930.	Chiron's Responses to Vertex's First Set of Requests to Admit (Nos. 1-9). Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Case Nos. C-98-02994 CW [PJH] and C-98-02995 CW [PJH]. 12/08/99
	931.	Chiron's Answers to Agouron's First Set of Interrogatories (Nos. 1-19). Chiron Corporation v. Agouron Pharmaceuticals, Inc. No. C-98-02995 CW [PJH], Related Case No. C-98-02974 CW [PJH]. 01/25/00
	932.	Chiron's Responses to Vertex's Second Set of Requests to Admit (Nos. 10-42). Chiron v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Action No. C-98-02995 CW [PJH]. 02/01/00

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	934.	Chiron's Responses to Agouron's First Set of Requests to Admit, and Subtended Interrogatories and Document Requests. Chiron Corporation v. Agouron Pharmaceuticals, Inc. No. C-98-02995 CW [PJH], Related Case No. C-98-02974 CW [PJH]. 02/04/00
	935.	Chiron's Supplemental Answers to Vertex's Second Set of Interrogatories (Nos. 8, 13-15). Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Case No. 98-02995 CW [PJH]. 02/16/00
	936.	Chiron's Supplemental Responses to Vertex's Second Set of Request to Admit (Nos. 23 and 37). Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Action No. C-98-02995 CW [PJH]. 05/31/00
	937.	Chiron's Supplemental Responses to Lilly's First Set of Requests to Admit (Nos. 2, 24, 37 and 49), Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Action No. C-98-02995 CW [PJH]. 05/31/00
	938.	Chiron's Supplemental Answers to Agouron's First Set of Interrogatories (Nos. 15-19). Chiron Corporation v. Agouron Pharmaceuticals, Inc. No. C-98-02995 CW [PJH], Related Case No. C-98-02974 CW [PJH]. 06/12/00
	939.	Chiron Corporation's Responses to Defendant Eli Lilly and Company's Supplemental Interrogatories. Chiron v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Case No. C-98-02995 CW [PJH]. 06/12/00
	940.	Chiron's Supplemental Responses to Agouron's First Set of Requests to Admit (Nos. 12-15 & 17-23). Chiron Corporation v. Agouron Pharmaceuticals, Inc. No. C-98-02995 CW (PJH), Related Case No. C-98-02974 CW [PJH], Related Case No. C-98-02974 CW [PJH]. 07/19/00
	941.	Chiron's Second Supplemental Responses to Vertex's Second Set of Requests to Admit. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Action No. C-98-02995 CW [PJH]. 08/21/00
	942.	Chiron's Second Supplemental Responses to Lilly's First Set of Requests to Admit. Chiron Corporation v. Eli Lilly and Company and Vertex Pharmaceuticals Inc. No. C-98-02974 CW [PJH], Related Action No. C-98-02995 CW [PJH]. 08/21/00
	943.	Duplicate of Reference No. 938.
	944.	Excerpt from Laboratory Notebook of Qui-Lim Choo dated June 9, 1989, page 9.
	945.	Excerpt from Laboratory Notebook of Qui-Lim Choo dated August 22, 1989, page 25.

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	946.	Civil Action No. C 98-2974 (CW) Chiron Corporation v. Eli Lilly, Subpoena in a civil case duces tecum, Ex. 524 at 1/25/00 deposition of A. Gorbalenya.
	947.	Transcript of deposition of Dr. Alexander E. Gorbalenya in Civil Action No. C-98-02974 (related cases Nos. C-98-02994 CW and C-98-0295 CW) in Chiron Corp. v. Eli Lilly and Co. and Vertex Pharmaceuticals, Inc. before the U.S. District Court Northern District of California, Oakland Division (January 25, 2000).
	948.	Letter from H.-J. Thiel to A. Gorbalenya dated September 11, 1990, Ex. 515 at 1/25/00 deposition of A. Gorbalenya.
	949.	Letter from H.-J. Thiel to A. Gorbalenya dated December 28, 1990, Ex. 519 at 1/25/00 deposition of A. Gorbalenya.
	950.	Letter from A. Gorbalenya to M. Collett dated March 28, 1989, Ex. 512 at 1/25/00 deposition of A. Gorbalenya.
	951.	Letter from H.-J. Thiel to A. Gorbalenya dated October 24, 1990, Ex. 517 at 1/25/00 deposition of A. Gorbalenya.
	952.	Letter from A. Gorbalenya to M. Houghton dated May 20, 1990, Ex. 514 at 1/25/00 deposition of A. Gorbalenya.
	953.	Letter from A. Gorbalenya to H.-J. Thiel dated December 1990, Ex. 518 at 1/25/00 deposition of A. Gorbalenya.
	954.	Letter from A. Gorbalenya to S. Siddell dated February 17, 1991, part of Ex. 520 at 1/25/00 deposition of A. Gorbalenya.
	955.	Letter from S. Siddell to A. Gorbalenya dated March 5, 1991, Ex. 521 at 1/25/00 deposition of A. Gorbalenya.
	956.	Letter from A. Gorbalenya and E. Koonin to S. Siddell dated June 4, 1991, Ex. 523 at 1/25/00 deposition of A. Gorbalenya.
	957.	Letter from M. Collett to A. Gorbalenya dated April 13, 1989, Ex. 513 at 1/25/00 deposition of A. Gorbalenya.
	958.	The Journal of Virology "Referee's report on Paper" March 11, 1991, part of Ex. 522 at 1/25/00 deposition of A. Gorbalenya.
	959.	The Journal of General Virology, receipt for manuscript from A. Gorbalenya dated 4.3.91 and manuscript entitled "Hepatitis C virus encodes a putative serine protease related to the proteases of flavi- and pestiviruses," both part of Ex. 520 at 1/25/00 deposition of A. Gorbalenya.

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	960.	The Journal of General Virology, "Referee's report on Paper " February 28, 1991, part of Ex. 522 at 1/25/00 deposition of A. Gorbalenya.
	961.	Chiron Laboratory Notebook #1298, pp. 184-190, 192 (Nov., 1986); (previously considered in US 08/103,961, reference I.A.117).
	962.	Independent Legal Opinion Concerning Hepatitis C Inventorship Dispute", Jun. 1991; (previously considered in US 08/103,961, reference I.A.109).
	963.	Inventorship Opinion of Gladys Monroy dated Jun. 7, 1988; (previously considered in US 08/103,961, reference I.A.119).
	964.	Letter dated Oct. 16, 1989 from Mr. Lanman of the NIH to Robert Blackburn of Chiron Corporation.
	965.	Memorandum by Dr. Houghton, dated Nov. 10, 1987; (previously considered in US 08/103,961, reference I.A.118).
	966.	Memorandum by Dr. Michael Houghton (undated); (previously considered in US 08/103,961, reference I.A.116).
	967.	Memorandum dated Nov. 11, 1987 by Dr. Michael Houghton; (previously considered in US 08/103,961, reference I.A.115).
	968.	Memorandum Re Interview of Dr. Daniel Bradley dated Apr. 11, 1991; (previously considered in US 08/103,961, reference I.A.112).
	969.	Memorandum Re Interview of Dr. Lacy Overby dated Jun. 21, 1991; (previously considered in US 08/103,961, reference I.A.114).
	970.	Memorandum Re Interview of Dr. Michael Houghton dated May 8, 1991; (previously considered in US 08/103,961, reference I.A.111).
	971.	Memorandum Re Interviews of Dr. Amy Weiner and Dr. Gary Van Nest dated Apr. 30, 1991; (previously considered in US 08/103,961, reference I.A.113).
	972.	Memorandum Re Interviews of Dr. Qui-Lim Choo and Dr. George Kuo dated May 8, 1991; (previously considered in US 08/103,961, reference I.A.110).
	973.	Excerpts of the deposition testimony of Drs. Houghton, Choo and Kuo in Civil Action Nos. C-98-02995 CN and C-98-02974 CW.
	974.	Excerpts of the deposition testimony of Drs. Houghton and Choo in Civil Action Nos. C-98-02995 CN and C-98-02974 CW.

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	975.	04/04/1990	07/505,434	Rosenberg application			
	976.	04/04/1991	07/680,358	Rosenberg application			
	977.	09/28/1992	07/956,433	Rosenberg application			
	978.	09/02/1993	08/116,048	Rosenberg application			
	979.	06/06/1994	08/254,496	Rosenberg application			
	980.	11/04/1986	4,620,948	Builder et al.			
	981.	11/15/1988	4,784,950	Hagen et al.			
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	986.	05/17/1994	5,312,737	Bolling et al.			

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	987.	02/10/1994	DE4240980	Germany			Abstract	
	988.	12/14/1989	DE P3819846	Germany			Abstract	
	989.	04/08/1987	0 217 645	Europe				
	990.	04/29/1987	0 219 874	Europe			Abstract	
	991.	06/19/1991	0 433 225	Europe				
	992.	12/23/1993	WO 93/25575	WIPO				
	993.	01/06/1989	64-02576	Japan			Abstract	
	994.	05/17/1989	1-124387	Japan			Abstract	
	995.	11/22/1994	6-319583	Japan			Abstract	
	996.	07/22/1997	9-187285	Japan			Abstract	

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Form PTO-1449 INFORMATION DISCLOSURE CITATION IN A PATENT (several sheets followed)	Docket No. 223002010005	Application No.: 09/884,456
	Applicant: Michael HOUGHTON et al.	
	Filing Date: June 18, 2001	Group Art Unit: 1656 Examiner: William W. Moore Confirmation No. 1937
	Delivery Date: September 4, 2009	

Examiner Initials	Ref. No.	OTHER DOCUMENTS (including author, title, date, etc.)
	1051.	Sherman, G. et al. (1997) "Development of a permanent cell line which expresses HCV nonstructural proteins" <i>Abstracts of the 37th Interscience Conference on Antimicrobial Agents and Chemotherap</i> , September 28-October 1, 1997, Toronto, Ontario, Canada 37:217, Abstract No. H-20.
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	Applicant: Michael HOUGHTON et al.	
	Filing Date: June 18, 2001	Group Art Unit: 1656
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U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate

FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO

OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title
	1058.	Agouron's Request for Reexamination of U.S. Patent No. 5,585,258 and appendix.
	1059.	Order re: Defendant Agouron's Motion For <i>In Camera</i> Review of Various Chiron Documents Pursuant to the Crime-Fraud Exception to the Attorney-Client Privilege. Special Master Yanni, Case No. C-98-2974 CW, Related Action Nos. C-98-2994 CW and C-98-2995 CW. United States District Court, Northern District of California. 4/16/01.

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FOREIGN PATENT DOCUMENTS

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OTHER DOCUMENTS

Examiner Initials	Ref. No.	OTHER DOCUMENTS <i>(including author, title, date, etc.)</i>
	1060.	Clerk's Notice Deeming Objection Denied, Chiron Corporation v. Agouron Pharmaceutical, Inc., in Civil Action No. Case No. C-98-2995 CW, June 12, 2001, 3 pages.
	1061.	Order re: Defendants Lilly and Vertex's Crime-Fraud Motion in Civil Action No. C-98-02974 CW (PJH) (related cases Nos. C-98-02994 CW (PJH) and C-9802995 CW (PJH) in Chiron Corp. v. Eli Lilly and Co. and Vertex Pharmaceuticals, Inc. before the U.S. District Court of Northern District of California, Oakland Division June 11, 2001, pp. 1-25.
	1062.	Anonymous, (May 16, 1988) "Chiron wins non-A, non-B virus race; rivals concede" <i>Biotechnology Newswatch</i> , 8(10):1 and 3.
	1063.	Anonymous, (August 7, 1989) "Hepatitis C antigens cloned" <i>Biotechnology Newswatch</i> , one page.
	1064.	Anonymous, (August 5, 1989) "Will the real hepatitis C stand up?" <i>The Lancet</i> , 2(8658):307-308.
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	1066.	Bartenschlager, R. (1997) "Molecular Targets in Inhibition of Hepatitis C Virus Replication" <i>Antiviral Chemistry and Chemotherapy</i> 8(4):281-301.

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	Applicant: Michael HOUGHTON et al.	
	Filing Date: June 18, 2001	Group Art Unit: 1656
	Delivery Date: September 4, 2009	

Examiner Initials	Ref. No.	OTHER DOCUMENTS <i>(including author, title, date, etc.)</i>
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	1068.	Blair, C.S. et al. (1996) "Anti-infectives: current perspectives on the treatment and prevention of hepatitis C infection" <i>Exp. Opin. Invest. Drugs</i> 5(12):1657-1671.
	1069.	Bradley, D.W. et al., (February 1981) "Persistent non-A, non-B hepatitis in experimentally infected chimpanzees" <i>The Journal of Infectious Diseases</i> , 143(2):210-218.
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	Applicant: Michael HOUGHTON et al.	
	Filing Date: June 18, 2001	Group Art Unit: 1656
	Delivery Date: September 4, 2009	

Examiner Initials	Ref. No.	OTHER DOCUMENTS <i>(including author, title, date, etc.)</i>
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	1079.	Kim, J.L. et al., (April 4, 1997) Erratum in Cell 89(1):159 of article published in Cell 87(2):345-355 on October 18, 1996 entitled "Crystal structure of the hepatitis C virus NS3 protease domain complexed with a synthetic NS4A cofactor peptide".
	1080.	Pletnev, A.G. et al., (January 1990) "Nucleotide sequence of the genome and complete amino acid sequence of the polyprotein of tick-borne encephalitis virus" <i>Virology</i> 174(1):250-263.
	1081.	Russell, P.K. et al., (1980) "Chemical and antigenic structure of flaviviruses" Chapter 18, in <u>The Togaviruses, Biology, Structure, Replication</u> , Schlesinger, R.W., ed., Academic Press, pp. 503-529.
	1082.	Sherman, G. et al., "Development of a permanent cell line which expresses hcv nonstructural proteins" Abstract No. H-20, one page.
	1083.	Sudo et al., (1997) "Novel hepatitis C virus protease inhibitors: 2,4,6-trihydroxy, 3-nitro-benzamide derivatives." <i>Antiviral Chemistry & Chemotherapy</i> , 8(6):541-544.
	1084.	Tabor, E. et al., (1979) "Detection of an antigen-antibody system in serum associated with human non-A, non-B hepatitis" <i>Journal of Medical Virology</i> 4:161-169.
	1085.	Tainer, J.A. et al. (1991) "Metal-binding sites in proteins" <i>Curr Opin Biotechnol.</i> 2(4):582-591.
	1086.	Tsiang, M. "Substrate specificity of HCV NS3 genome analyzed with modified peptide substrates" <i>Antiviral Research</i> Abstract No. 180, one page.
	1087.	Villarejos, V.M. et al., (1984) "Observations on an antigen-antibody system related to non-A, non-B hepatitis" Chapter 28 in <u>Viral Hepatitis and Liver Disease</u> , G.N. Vyas et al., eds., Grune and Stratton, 367-369.
	1088.	Villarreal et al. (January 27, 1997) "Structural Bioinformatics, Inc. and CyberChemics, Inc. collaborate to speed the generation of hepatitis C viral protease inhibitors" <i>Business Wire</i> , p1270170, located in Dialog database in file 649, fulltext, 2 pages.

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Examiner Initials	Ref. No.	OTHER DOCUMENTS <i>(including author, title, date, etc.)</i>
	1089.	Order Following <i>In Camera</i> Review of Chiron's Privileged Documents Pursuant to Agouron Crime-Fraud Motion in Civil Action No. C-98-02974 CW (PJH) (related cases Nos. C-98-02994 CW (PJH) and C-9802995 CW (PJH) in Chiron Corp. v. Eli Lilly and Co. and Vertex Pharmaceuticals, Inc. before the U.S. District Court of Northern District of California, Oakland Division July 18, 2001, 5 pages.

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U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date if Appropriate
	1090.	06/16/1987	4,673,634	Seto et al.			
	1091.	10/27/1987	4,702,909	Villarejos et al.			
	1092.	12/06/1994	5,371,017	Houghton et al.			

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Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO
	1093.	06/01/1989	WO89/04669	WIPO			

OTHER DOCUMENTS

Examiner Initials	Ref. No.	OTHER DOCUMENTS <i>(including author, title, date, etc.)</i>
	1094.	Korant et al., (1988) "Viral proteases: an emerging therapeutic target" <i>CRC Crit. Rev. Biotech.</i> 8(2):149-157.
	1095.	Pichuanes, S. et al., (1989) "Expression of authentic and enzymatically active HIV-1 proteinase in bacteria and yeast" in <u>Current Communications in Molecular Biology, Viral Proteases as Targets for Chemotherapy</u> , Cold Spring Harbor Laboratory Press, Krausslich, H. et al., Eds., pp. 215-222.
	1096.	McQuade et al., (1990) "A synthetic HIV-1 protease inhibitor with antiviral activity arrests HIV-like particle maturation" <i>Science</i> 247:454-456.
	1097.	Order Sustaining Plaintiff's Objection to Special Master's Order Re: Defendants Lilly and Vertex's Crime-Fraud Motion for the United States District Court for the Northern District of California for Civil Case No. C 98-02974 CW, between Plaintiff, Chiron Corporation and, Defendants, Eli Lilly and Co., Vertex Pharmaceuticals Inc., 14 pages.
	1098.	Chiron Corporation's request for reexamination of the 5,371,017 patent, filed with the United States Patent and Trademark Office on October 8, 1999, 8 pages, with U.S. PTO Form 1449, 5 pages.

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	Applicant: Michael HOUGHTON et al.	
	Filing Date: June 18, 2001	Group Art Unit: 1656
	Delivery Date: September 4, 2009	

Examiner Initials	Ref. No.	OTHER DOCUMENTS <i>(including author, title, date, etc.)</i>
	1099.	Order Granting Request for Reexamination of the 5,371,017 patent, control no. 90/005,512, issued on December 22, 1999, paper no. 5, 3 pages, and intialled Form 1449 (5 pages), and Notice of Reexamination Request Filing Date, one page (paper no. 3).
	1100.	Order Granting Request for Reexamination of the 5,371,017 patent, control no. 90/005,582, issued on February 22, 2000, paper no. , 4 pages, with U.S. PTO Form 1449.
	1101.	Office Action in Reexamination of the 5,371,017 patent, issued on November 9, 2000, paper no. 6, 4 pages.
	1102.	Chiron Corporation's request for reexamination of the 5,585,258 patent, control no. 90/005,513, filed with the United States Patent and Trademark Office on October 8, 1999, 7 pages, with U.S. PTO Form 1449, 5 pages.
	1103.	Order Granting Request for Reexamination of the 5,585,258 patent, issued on December 22, 1999, paper no. 5, 5 pages, and intialled Form 1449 (5 pages), and Notice of Reexamination Request Filing Date, one page (paper no. 3).
	1104.	Office Action in Reexamination of the 5,585,258 patent, issued on November 9, 2000, 5 pages.
	1105.	Patent Owner's Response to Office Action in Reexamination of the 5,585,258 patent, under 37 C.F.R. §1.550(b) filed on February 20, 2001, 15 pages, with Exhibits A-M.
	1106.	Chiron Corporation's request for reexamination of the 5,397,691 patent, filed with the United States Patent and Trademark Office on October 8, 1999, 7 pages, with U.S. PTO Form 1449, 5 pages.
	1107.	Order Granting Request for Reexamination of the 5,397,691 patent issued on December 22, 1999, paper no. 5, 4 pages, and intialled Form 1449 (5 pages).
	1108.	Office Action in Reexamination of the 5,397,691 patent, issued on November 9, 2000, 4 pages.
	1109.	Patent Owner's Response to Office Action in Reexamination of the 5,397,691 patent, under 37 C.F.R. §1.550(b) filed on February 20, 2001, 15 pages, with Exhibits A-M.
	967.	Memorandum by Dr. Michael Houghton (undated); (previously considered in US 08/103,961, reference I.A.116). Document no. 967.

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